

## Guide to ANSI Codes

### ANSI / BHMA Standard A156.4: Door Controls - Closers

#### Surface Applied Closers

##### Testing Criteria

Listed below are only some of the tests and criteria covered in this standard. For simplification, all tests and details of tests are not elaborated on. For exact and complete details of tests, etc. refer to the complete ANSI/BHMA standard.

##### 1. Cycle test

One cycle consists of the door being opened to 90° and released, allowing the door to close. The speed adjustment valves are set to allow a 3 to 6 second closing time.

###### Door closers being cycle tested without the backcheck feature.

Grade	Cycles
Grade 1	2,000,000 cycles
Grade 2	1,000,000 cycles
Grade 3	500,000 cycles

###### Door closers being cycle tested with the backcheck feature.

Grade	Cycles
Grade 1	1,500,000 cycles
Grade 2	750,000 cycles
Grade 3	500,000 cycles

In addition to the above cycles, door closers with the backcheck feature are submitted to additional backcheck tests and other abusive tests in which the door is cycled.

##### 2. Door closing swing in which the door must be under control

###### Surface Closer

###### Grade    Cycles

Grade 1 115 degrees

Grade 2 85 degrees

Grade 3 70 degrees

###### Overhead Concealed Closer

###### Grade    Cycles

Grade 1 85 degrees

Grade 2 70 degrees

Grade 3 70 degrees

##### 3. Closing Force

The closing force of a door is taken 30 inches from the hinge when the door is opened 1/2 to 3 inches. (Weight of door used varies with size of door closer being tested).

## **Closer Size**

### **Closer Size**

### **Closing Force**

Number 1 size door closer	2 pounds of closing force, minimum
Number 2 size door closer	3 pounds of closing force, minimum
Number 3 size door closer	5 pounds of closing force, minimum
Number 4 size door closer	8 pounds of closing force, minimum
Number 5 size door closer	11 pounds of closing force, minimum
Number 6 size door closer	14 pounds of closing force, minimum

Door closing forces are usually measured with the standard arm and mounting application. Various arms and applications affect closing forces. Parallel, track and concealed arms reduce the closing force.

**Note:** Door closers from some manufacturers may be available with an adjustable closing force of 15%, 35% or 50% over the minimum value of the sized closer.

Door closers with an adjustable closing force are also available with a partial or complete range of all door closer sizes.